

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

SPECIFICATION

INVENTION: RECEIVING DEVICE FOR PEDALS OF A MOTOR VEHICLE

INVENTOR: Hans-Uwe BAUMANN
Citizenship: German
Post Office Address/ Adalbert-Stifter-Strasse 66
Residence: 70437 Stuttgart
Germany

INVENTOR: Dieter SEMMEL
Citizenship: German
Post Office Address/ Tuchbleiche 26
Residence: 70439 Stuttgart
Germany

INVENTOR: Vasil BARBUNOPULOS
Citizenship: German
Post Office Address/ Steinestrasse 30/5
Residence: 71665 Vaihingen
Germany

ATTORNEYS: CROWELL & MORING, L.L.P.
P.O. Box 14300
Washington, D.C. 20044-4300
Telephone No.: (202) 628-8800
Facsimile No.: (202) 628-8844

RECEIVING DEVICE FOR PEDALS OF A MOTOR VEHICLE

BACKGROUND AND SUMMARY OF THE INVENTION

[0001] This application claims the priority of German Application No. 100 31 157.1, filed June 27, 2000, the disclosure of which is expressly incorporated by reference herein.

[0002] The invention relates to a receiving device for pedals of a motor vehicle comprising a mounting plate on which an accelerator pedal, a brake pedal and a clutch pedal are swivellably disposed.

[0003] In a known manner, the foot controls of a motor vehicle comprise a subassembly including an accelerator pedal, a brake pedal and a clutch pedal which, either individually or together, can be installed on a mounting plate into a motor vehicle. In the case of a vehicle with an automatic transmission, there is no clutch pedal, while the clutch pedal is required in the case of a manual transmission.

[0004] An object of the invention is to provide a receiving device for pedals of a motor vehicle which receives the pedal as a constructional unit and, in the case of an automatic transmission, a simple installation or removal of the clutch pedal is ensured.

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[0005] According to certain preferred embodiments of the invention, this object is achieved by way of the clutch pedal being swivellably held in an insert which forms a preassembled constructional unit with the clutch pedal, which constructional unit can be fastened between projecting legs of the mounting plate and is constructed to be optionally removable. Additional advantageous characteristics are contained in the subclaims.

[0006] Preferred advantages achieved by way of certain preferred embodiments of the invention are that a clutch pedal can be removed from a receiving device and installed into it in a simple manner without the requirement of a high-expenditure mounting. According to certain preferred embodiments of the invention, this is advantageously achieved in that the clutch pedal is swivellably held in an insert which forms a constructional unit with the pedal. This constructional unit is fastened between two projecting legs of the mounting plate so that an optional installation or absence of the clutch pedal is permitted.

[0007] So that the absence or the installation of the clutch pedal can be implemented without any high mounting expenditures, the insert for the clutch pedal can be fastened, on the one hand, by way of an existing continuous bearing bolt for the brake pedal and, on the other hand, by way of a

separate fastening screw between the legs of the mounting plate.

[0008] An optimal bracing of the pedal insert on the mounting plate between the legs takes place in that the bearing bolt for the swivellable receiving of the brake pedal is connected with a fitted-over sleeve of the bolt, which sleeve forms a support between the inner receiving leg for the insert and another outer supporting leg for a head of the bearing bolt on the mounting plate.

[0009] A good stability of the fastening according to certain preferred embodiments of the invention is achieved particularly in that the insert has a U-profile-shaped cross-section, and the bearing bolt as well as the fastening screw are arranged at a vertical distance from one another.

[0010] A preferred embodiment of the invention is illustrated in the drawings and will be described in detail in the following.

[0011] Other objects, advantages and novel features of the present invention will become apparent from the following detailed description of the invention when considered in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Figure 1 shows a top view of a receiving device of the pedals with the clutch pedal, the brake pedal and the accelerator pedal;

[0013] Figure 2 shows a diagrammatic representation of the receiving device with a clutch pedal inserted by way of an insert; and

[0014] Figure 3 shows a frontal view of the receiving device according to Figure 1 with a removed clutch pedal.

DETAILED DESCRIPTION OF THE DRAWINGS

[0015] As in Fig. 1, the receiving device 1 comprises basically a mounting plate 2 with a clutch pedal 3, a brake pedal 4 and an accelerator pedal 5. As a unit with the pedals 3, 4 and 5, the mounting plate 2 can be fastened, for example, on a front wall of a vehicle.

[0016] The clutch pedal 3 is provided with an insert 12 in which the pedal 3 is swivellably held on an axis 6. Together with the pedal 3, the insert 12 forms a preassembled finished constructional unit 7 which is connected with the mounting plate 2 by way of screws 8, 9.

[0017] For this purpose, the mounting plate 2 has two legs 10, 11 which project from the mounting plate and between which the insert 12 can be inserted in the case of a manual transmission and can be absent in the case of an automatic transmission.

[0018] The fastening of the insert 12 takes place by way of the screws 8, 9 which are arranged in a mutually spaced manner in the height h. The screw 8 situated on top is present and is simultaneously used as a bearing shaft for the brake pedal 4. In this case, it is provided with a sleeve 8a which is swivellably disposed on the screw 8 and is fixedly connected with the brake pedal 4.

[0019] The sleeve 8a extends between the inner leg 11 of the receiving device for the insert 12 and an outer leg 14 on the mounting plate 2. This results in a secure supporting of the insert 12 by the intermediately disposed sleeve 8a on the legs 11 and 14.

[0020] As illustrated in detail in Figure 2, the insert has a U-shaped profile in its cross-section, the outer legs of the profile being situated opposite the legs 10, 11 of the mounting plate 2. When the clutch pedal 3 is absent, as illustrated in detail in Figure 3, the screw 8 is used in an unchanged manner, but screw 9 can, for example, be absent.

[0021] The foregoing disclosure has been set forth merely to illustrate the invention and is not intended to be limiting. Since modifications of the disclosed embodiments incorporating the spirit and substance of the invention may occur to persons skilled in the art, the invention should be construed to include everything within the scope of the appended claims and equivalents thereof.